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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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NIXON & VANDERHYE PC
1100 NORTH GLEBE ROAD
8TH FLOOR
ARLINGTON, VA 222014714

EXAMINER	
FETZNER, TIFFANY A	
ART UNIT	PAPER NUMBER
2859	

DATE MAILED: 12/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/391,399	YAMAGATA, HITOSHI	
	Examin r	Art Unit	
	Tiffany A Fetzner	2859	MW

-- The MAILING DATE of this communication appears on the cov r sheet with th correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 September 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *09 August 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED Non-Final ACTION

1. The September 30th 2003 Response is considered free of new matter by the examiner.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

3. The examiner notes that a certified English translation of applicant's Priority document was received with the response of September 30th 2003, therefore applicant has finally satisfied the requirements of 37 CFR 1.55. See MPEP § 201.15 in order to rely upon the foreign priority papers to overcome any art rejections based on the **Boernert et al.**, reference US patent 6,317,619 B1 filed July 29th 1999.

Response to Arguments

4. Because applicant has perfected the claim for priority, the **Boernert et al.**, reference US patent 6,317,619 B1 filed July 29th 1999; is no longer available as prior art against the claims of the instant application, and all the rejections based on the **Boernert et al.**, reference are **rescinded**. However, a new grounds of rejection under **35 U.S.C. 103(a)** based upon the **Wilk** US patent 5,899, 857 issued May 4th 1999 filed January 7th 1997; (that was made of record in the original first office action) and the combination of the **Englund et al.,** US patent 5,197,474 issued March 30th 1993; and **McDougall** US patent 4,689,591 issued August 25th 1987; which were made of record in the last office action of June 30th 2003, (i.e. **Englund et al.,** and **McDougall** were applied in the last office action, for the purposes of showing the features lacked by **Boernert et al.**,;) are also available as a combination of prior art that constitutes a new grounds of rejection because these two reference can also teach, show and suggest the features

lacked by the **Wilk** reference in combination. For the purposes of ensuring a complete examination, the new grounds of rejection with art already of record are made and this action is non-final.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

12. **Claims 1-12** and **new claims 13-14** are rejected under **35 U.S.C. 103(a)** as obvious over **Wilk** US patent 5,899, 857 issued May 4th 1999 filed January 7th 1997; in view of **Englund et al.,** US patent 5,197,474 issued March 30th 1993; and in further view of **McDougall** US patent 4,689,591 issued August 25th 1987.

13. With respect to **(Once Amended) Claim 1, Wilk** teaches "a patient couch, (i.e. component 12 in Figure 1) which enables movement of the patient" [See Figure 1 and shifting mechanism 38]; **Wilk** teaches "a position information establishing apparatus which provides 3-dimensional position information of the region of interest of the patient" [See abstract, col. 2

lines 1-33]; **Wilk** also teaches and a patient couch controller (i.e. the computer as taught in col. 3 lines 17-22, or support positioning module 66 as taught in col. 7 lines 10-13, with control module 58 and shifting mechanism 38) for moving the patient couch, based on the provided position information" [See col. 3 lines 46-50, col. 3 lines 56-58, col. 4 lines 1-15, col. 7 lines 10-13, col. 7 lines 18-21] "so that the region of interest is re-positioned in 3-dimensions (i.e. [See col. 3 lines 16-22, col. 7 lines 10-13]), substantially either at the center of the static magnetic field or at the center of the gradient magnetic field." (i.e. interpreted broadly as the "focal point of the transmission components" because Scanner 30 is an NMR type imaging apparatus, [See col. 4 lines 60-65 and figure 1] and the center of the static magnetic field, (i.e. the isocenter of the magnet) is a conventional focal point of magnetic uniformity in an NMR / MRI apparatus. Additionally the focal points of the electromagnetic radiation beams 160a and 160b which extend along a line or path (i.e. components 162a and 162b) at a particular angle (i.e. a1) determined by the computer 178, with the frequency of beams 160 a and 160 b transmitted simultaneously , [See col. 12 lines 28-39] directly suggests the presence of "gradients" used in combination with excitation for electromagnetic radiation. Therefore in **Wilk,** the repositioning of the electromagnetic radiation fields, occurs also at the focal points (i.e. the center) of the gradient components 162a and 162b, (i.e. "at the center of the gradient magnetic field", suggested by the **Wilk,** reference.

7. **Wilk** teaches that the computer 28 may be connected to a NMR type imaging apparatus 30, possibly supplemented with ultrasonic imaging, juxtaposed to patient support 12. [See col. 4 lines 60-65] This teaching is important because it directly suggests using the invention with an NMR or MRI apparatus, and conventionally NMR / MRI apparatuses inherently include: "a

static magnetic field generator for generating a static field; a gradient magnetic field generator for generating a gradient magnetic field that is superimposed on the static magnetic field; a radio-frequency magnetic field pulse transmitting/receiving unit, which applies a radio frequency pulse to a region of interest of a patient that is located within the static magnetic field, and which also receives a magnetic resonance signal that is generated from the patient;" Each of these features is considered inherent to the **Wilk** reference because an NMR / MRI scanning apparatus must inherently possess these features, in order to be an NMR / MRI apparatus.

8. Specifically in the Art of NMR / MRI the phenomenon of "magnetic resonance" is conventionally utilized by: placing a subject in a static magnetic field, generated by static magnetic field generating means; applying via an RF transmit/reception means an RF electromagnetic excitation pulse at a frequency which causes a detectable nucleic precession when superimposed on a region of a subject in a static magnetic field, and the application of additional RF magnetic fields applied before, with, or after the excitation pulse, in different directions (i.e. gradients) to enable the location of the detectable NMR / MRI signal, from the region of the subject actually being detected, to be located in three-dimensional space. All NMR / MRI devices make use of these principles of ordinary skill, because these principles define what the art of the NMR / MRI technology is.

9. **Wilk** lacks directly teaching that the locations at which a patient is repositioned in three-dimensions may comprise locations that are "substantially either at the center of the static magnetic field or at the center of the gradient magnetic field." However both features of patient positioning / repositioning (i.e., "substantially at the center of the static magnetic field" or

"substantially at the center of the gradient magnetic field) are also known from the prior arts of **McDougall** and **Englund et al.**

10. The **Englund et al.,** reference teaches positioning / repositioning [See Figures 1, 2, 4] a patient bed upon which an RF coil is mounted so that the center of imaging of the RF coil is located in the axial direction of the magnet at the same point in the middle (i.e. the center) of the magnet [See **Englund et al.**, col. 5 lines 17-25; col. 2 lines 27-33; col. 1 lines 49-52; Figures 1-4; abstract].

11. Additionally, the **McDougall** reference teaches and shows an MR apparatus with a patient on table 22 of Figure 1 where the patient has already been brought into the device, and teaches that in the past it was necessary to place the patient so that the imaging locations of a patient's body intersected the homogeneous (i.e. static) region which was centered at the geometric center of magnetic field generating solenoids. [See **McDougall** col. 1 lines 9-26; the examiner notes that this teaching includes both RF and gradient magnetic field solenoids. The examiner also notes that this teaching also suggests the examiner's position that in the **Wilk** reference the focal points of the electromagnetic radiation (i.e. any electromagnetic wavelength including the RF wavelength of NMR / MRI) occur "substantially at the center of the static magnetic field" or "substantially at the center of the gradient magnetic field", as mentioned above, because **McDougall** teaches applicant's limitation has been conventionally known in the art for more than 15 years.

12. **McDougall** also teaches that an MRI magnet assembly generates a substantially uniform magnetic field in a homogeneous (i.e. static) region, with the homogeneous region and the "center" of the homogeneous region being offset from the geometric center of the assembly. [See

McDougall abstract, Figure 1, col. 1 line 5 through col. 5 line 34] Additionally, the gradient coils of **McDougall** are taught to be conventional, so it would have been obvious to one of ordinary skill in the art, at the time that the invention was made that the gradient coils, like the RF coils, intersect the homogeneous (i.e. static) region of the magnet generating means "at the geometric center of the magnetic field generating solenoids" (ie. gradient coils and RF coils are magnetic field generating solenoids).Therefore, the limitation of imaging locations of a patient at "substantially the center of the static magnetic field" is taught by both the **McDougall** and **Englund et al.,** references, with the **McDougall** reference also addressing imaging locations of a patient at substantially the center of the gradient magnetic field. [See **McDougall** col. 5 lines 5-15; col. 1 lines 10-26].

13. It would have been obvious to one of ordinary skill in the art, at the time that the invention was made to combine the **McDougall** and **Englund et al**., magnetic references because the invention of **Englund et al**., is the transport mechanism (i.e. the manner in which) the patient / subject / object is moved into the MRI / NMR device by a patient couch, while the **McDougall** reference is an invention for MRI / NMR imaging with offset magnetic centers after a patient has been brought into the MRI / NMR device, therefore one is readily usable with the other. It is obvious to use a means of transporting a patient into / "out of" an MRI / NMR device, in conjunction with a means of performing an MRI / NMR scan, because placing, or bringing, a subject within the NMR / MRI device is the conventionally well known first step in performing an MRI / NMR scan of internal anatomy.

14. It would also have been obvious to one of ordinary skill in the art, at the time that the invention was made to modify the teaching of **Wilk**, which lacks the explicit repositioning in 3-

dimensions either, at the center of the static or at the center of the gradient magnetic field, because the limitation that the most effective, imaging with the strongest possible signal occurs at the center of the static or at the center of the gradient magnetic field is known from the teachings of **McDougall** where the center of the static magnetic field, or gradient field, is offset from the magnetic isocenter; and **Englund et al.**, where the imaging region is shown to be substantially the center of the static magnetic field, or gradient magnetic field.

15. An individual of ordinary skill in the art at the time that the invention was made would also readily recognize the advantage of being able to reposition a patient during an MRI scan, to keep the center of the patients target anatomy aligned with either the center of the static or at the center of the gradient magnetic field, as a means of minimizing motion artifacts, and reducing scan time since repositioning would not require the patient to be completely removed from the scanner. Additionally, the **Wilk** 3D NMR position detection system is adaptable to any NMR device, even those which have been modified to include ultrasonic imaging, [See col. 4 line 45 through col. 5 line 9], therefore the **Wilk** reference is usable with the **McDougall** and **Englund et al.**, inventions, and it would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify the **McDougall** and **Englund et al.**, inventions to include the teachings of **Wilk** because correct positioning of the patient within the MRI . NMR scanner reduces overall scan time, minimizes artifacts, and ensures that the correct three-dimensional patient anatomy is imaged.

16. With respect to **(Once Amended) Claim 2, Wilk teaches** "the position information establishing apparatus accepts input position information based on an image of the patient that is obtained from the magnetic resonance signal." [See col. 4 line 60 through col. 5 lines 1-9] The

same reasons for rejection, obviousness, and motivation to combine that apply to **claim 1** also apply to **claim 2**.

17. With respect to **(Once Amended) Claim 3, Wilk** teaches "the position information establishing apparatus comprises a position detection apparatus that detects the position of the region of interest." [See **Wilk** col. 3 line 67 through col. 4 line 15, col. 7 lines 18-21, col. 7 lines 38-39] The same reasons for rejection, obviousness, and motivation to combine that apply to **claim 1** also apply to **claim 3**.

18. With respect to **(Once Amended) Claim 4, Wilk** teaches "the patient couch controller" (i.e. component 58) "performs an initial approximate positioning of the patient couch, based on a signal from the position detection apparatus." [See col. 5 lines 23-33, col. 3 lines 17-22, col. 3 lines 46-51, col. 3 lines 60-65, col. 3 lines 67 through col. 4 line 16 In Figure 1 See shifting mechanism 38, MR scanner 38, computer 28, Focal point relocation control 34; In Figure 2 support positioning module 66] The same reasons for rejection, obviousness, and motivation to combine that apply to **claims 1**, and **3** also apply to **claim 4.**

19. With respect to **(Once Amended) Claim 5, Wilk** suggests "the patient couch (i.e. component 12) is capable of moving the patient in the horizontal and vertical directions." [See col. 6 lines 8-29, col. 6 line 66 through col. 7 line 1, and col. 7 lines 10-13; col. 1 lines 39-44, where three-dimensional data is continuously updated and tracked by tracking module 50 and then in response to tracking module 50, control module 58 positions the support 12 to display the target region. This directly implies that the support 12 is capable of horizontal and vertical motion because "three-dimensional" position data is tracked, and the target area stays centered. The examiner notes that the support 12 is necessarily capable of horizontal and vertical because

the magnets and other components are fixed and do not move, (i.e. it is only support 12 that moves). Therefore, movement up, down, forward, backward, right, and left is suggested, via the shifting mechanism means 38 shown in Figure 1, which is connected to the patient support and the computer 28. Additionally, in three dimensional space there are six-degrees of motional movement freedom (i.e. up, down, forward, backward, right, and left) which are inherent with three-dimensional position information, and a means to keep a location centered]. The same reasons for rejection, obviousness, and motivation to combine that apply to **claim 1** also apply to **claim 5**.

20. With respect to **(Once Amended) Claim 6**, which is the **corresponding method claim** of previously rejected **apparatus claim 1**, **Wilk** teaches, suggests and shows "A method for performing magnetic resonance imaging diagnosis, said method comprising: placing the patient onto a patient couch that is disposed within a static magnetic field and a gradient magnetic field"; [See Figure 1 which shows the patient on a patient couch in a conventional NMR device. All the teachings in the rejection of claim 1 also apply and need not be reiterated.] "moving the patient couch based on a signal from a position detector so that a region of interest of the patient approximately coincides with the center of the static magnetic field or the center of the gradient magnetic field;" [See col. 3 lines 17-22] The examiner broadly considers the focal point of the radiation transmission and guidance components to represent the center of applied gradient magnetic fields, and / or the isocenter of the static magnetic field.

21. **Wilk** teaches, "applying a radio-frequency pulse (i.e. any type of electromagnetic energy) to the region of interest of the patient, and receiving a signal (i.e. broadly considered a magnetic resonance signal) that is generated from the patient; reconstructing a plurality of images of the

patient, (i.e. the images of **Wilk** are continually updated) based on the signal received. (i.e. broadly considered a magnetic resonance signal)" [See col. 3 line 46 through col. 4 line 15 and col. 4 lines 60-65 where connection to NMR type apparatus 30 suggests applying and receiving RF frequency and MR signal data.] **Wilk** teaches, "selecting an image (i.e. continually updating the three-dimensional image that is displayed on the monitor) that includes the region of interest (i.e. the target image) from the plurality of images of the patient [See col. 2 lines 1-33, col. 4 line 66 through col. 5 line 9, abstract]; and moving the patient couch, based on the selected image [See col. 4 lines 1-15, col. 3 lines 17-22, col. 6 lines 8-13, col. 7 lines 10-21], so that the region of interest of the patient substantially coincides in 3-dimensions with the center of the static magnetic field or the center of the gradient magnetic field." [See col. 3 lines 17-22]

22. Additionally, **McDougall** and **Englund et al.**, also teach "A method for performing magnetic resonance imaging diagnosis, said method comprising: placing the patient onto a patient bed that is disposed within a static magnetic field and a gradient magnetic field"; [See **McDougall** Figure 1 col. 1 lines 10-26; and **Englund et al.**, Figures 1c and 4c] The same reasons for rejection, obviousness, and motivation to combine that apply to **claim 1** also apply to **claim 6**.

23. With respect to **(Once Amended) Claim 7**, **Wilk** teaches, "designating the region of interest within the selected image." [See col. 3 lines 48-50, col. 4 line 60 through col. 5 line 9, col. 5 lines 22-33] The same reasons for rejection, obviousness, and motivation to combine that apply to **claim 6** also apply to **claim 7**.

24. With respect to **Claim 8**, **Wilk** teaches, "A method for performing magnetic resonance imaging diagnosis, said method comprising: placing the patient onto a patient couch [See Figure

1] that is disposed within a static magnetic field and a gradient magnetic field (i.e. the presence of a static and gradient magnetic field is an inherent part of NMR apparatus 30 taught by **Wilk** [See the rejection of claim 1] **Wilk** also teaches, designating a 3-dimensional position of a region of interest of the patient; [See col. 3 lines 48-50 col. 4 line 60 through col. 5 line 9, col. 5 lines 22-33], and moving the patient couch, so that the region of interest of the patient substantially coincides 3-dimensionally with the center of the static magnetic field or the center of the gradient magnetic field." [See col. 3 lines 17-22, col. 4 lines 1-15, col. 6 lines 8-13, col. 7 lines 10-21] The examiner broadly considers the focal point of the radiation transmission and guidance components to represent the center of applied gradient magnetic fields, and / or the isocenter of the static magnetic field and it is this point that **Wilk** teaches the target region coincides with. The same reasons for rejection, obviousness, and motivation to combine that apply to **claim 1** also apply to **claim 8**.

25. With respect to **Claim 9, Wilk** teaches "moving the patient couch so that the region of interest of the patient approximately coincides with the center of the static magnetic field or the center of the gradient magnetic field;". [See col. 3 lines 17-22] **Wilk** also teaches, "applying a radio-frequency pulse (i.e. any type of electromagnetic energy) to the region of interest of the patient, and receiving a signal (i.e. broadly considered a magnetic resonance signal) that is generated from the patient; and **Wilk** teaches reconstructing a plurality of images of the patient, (i.e. the images of **Wilk** are continually updated) based on the signal received, (i.e. broadly considered a magnetic resonance signal)." [See col. 3 line 46 through col. 4 line 15 and col. 4 lines 60-65 where connection to NMR type apparatus 30 suggests applying and receiving RF frequency and MR signal data.] Additionally, **Wilk** teaches, "selecting an image (i.e. continually

updating and therefore continually selecting, the three-dimensional image that is displayed on the monitor) that includes the region of interest (i.e. the target image) from the plurality of images of the patient, [See col. 2 lines 1-33, col. 4 line 66 through col. 5 line 9, abstract] and designating (i.e. choosing) the region of interest (i.e. the target region) within the selected image." [See col. 5 lines 22-33, col. 6 col. 6 lines 31-39, col. 3 lines 45-65, col. 3 line 67 through col. 4 line 15 col. 2 lines 1-38.] The same reasons for rejection, obviousness, and motivation to combine that apply to **claims 1, 6,** 8 also apply to **claim 9**.

26. With respect to **Claim 10, Wilk** teaches "obtaining positional information from a position sensor (i.e. detector 70) representing a 3 dimensional position for the region of interest." [See col. 7 lines 10-21] The same reasons for rejection, obviousness, and motivation to combine that apply to **claims 1, 8, 9** also apply to **claim 10**.

27. With respect to **(Once Amended) Claim 11, Wilk** teaches "A method for three-dimensionally positioning a patient region of interest substantially at an optimum MR imaging position (i.e. the focal point, or magnetic isocenter of the apparatus) within an MRI system" [See col. 4 lines 60-65 which suggest an NMR scanner 30 and therefore direct use in an MR system]

28. **Wilk** teaches said method comprising: positioning a patient region of interest at a first position within an MRI field of view; [See Figure 1, with component 30 interpreted as an NMR Scanner.] "generating images (i.e. interpreted as MR images) of the patient in three dimensions while located at said first position;" [See abstract, col. 2 lines 1-14] "locating and designating the patient region of interest position within said images" [See col. 3 lines 46-49, col. 5 lines 22-33, col. 6 lines 30-39]. Acker et al., also teaches these limitations [See Figure 1, col. 16 lines 19-21, col. 16 line 22 through col. 17 line 17]

29. **Wilk** also teaches "generating 3-dimensional position difference data between the designated position of the patient region of interest in the images and an optimum MR imaging position; and re-positioning the patient region of interest in 3-dimensions from said first, now designated, position to an optimum MR imaging position using said position difference data." [See col. 3 lines 45 through col. 4 line 15, col. 3 lines 17-22 which teach the optimal position of having the target region coincide with the focal point, or magnetic isocenter, col. 2 lines 1-45 and the abstract.] Acker et al., also teaches this limitation [See col. 17 lines 28-53, col. 18 lines 59-64, col. 20 lines 12-37, col. 21 lines 49-54, col. 21 line 67 through col. 22 line 50, and col. 16 line 19 through col. 17 line 17; Center point 22 of imaging volume 20 is illustrated in Figure 3.] The same reasons for rejection, obviousness, and motivation to combine that apply to **claims 1, 6, 8**, also apply to **claim 11**.

30. With respect to **Claim 12, Wilk** teaches "position data provided by a position sensor that automatically senses a relative spatial position between a movable patient and a fixed MRI system." [See col. 7 lines 10-21, col. 7 lines 38-39, and detector components 70.] The same reasons for rejection, obviousness, and motivation to combine that apply to **claims 1, 6, 8, 11**, also apply to **claim 12**.

31. With respect to **New apparatus Claim 13,** and **corresponding new method Claim 14**, which are just another version of **apparatus Claim 1,** and **corresponding method Claim 6,** with the **additional features** of "a main enclosure formed to enable the enclosing of a patient, the main enclosure including the static magnetic field and the gradient magnetic field", and that the repositioning at the center of the static magnetic field, or at the center of the gradient

magnetic field is "based on the three-dimensional position information from the position information establishing apparatus."

32. **Wilk** teaches, shows, suggests and lacks the same features as those mentioned in the rejection of **claims 1** and **6**, combined with the references of **McDougall** and **Englund et al.**, which need not be reiterated. Additionally, although the additional feature of "a main enclosure formed to enable the enclosing of a patient, the main enclosure including the static magnetic field and the gradient magnetic field", is lacked by the **Wilk** reference. The references of **McDougall** [See **McDougall** Figure 1] and **Englund et al.**, [See Figures 1 2 and 4] show and suggest an enclosure around the patient containing the static magnetic field and the gradient magnetic field, required for imaging with an NMR / MRI device. **Wilk** also teaches, shows, and suggests that the repositioning at the center of the static magnetic field, or at the center of the gradient magnetic field is "based on the three-dimensional position information from the position information establishing apparatus." [See col. 3 line 15 through col. 4 line 28;col. 4 line 45 through col. 8 line 43; Figure 1 computer 28 shifting mechanism 38, patient support 12 scanner 30, relocation control 36; Figure 2 support positioning module 66, spectrometer 26]. The same reasons for rejection, obviousness, and motivation to combine that apply to **claims 1, 6,** also apply to **New claims 13** and **14**.

Prior Art made of Record

32. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

A) US patent 6,112,110 issued to **Wilk**, August 29th 2000 and filed February 12th 1999. (Applicant's perfected priority eliminates this reference as prior art.)

B) US patent 6,198,957 B1 issued to **Green** March 6th 2001 filed December 19th 1997.

C) US patent 5,735,278 issued to **Hoult et al.,** April 7th 1998 and filed March 15th 1996.

D) US patent 924,987 issued to **Meaney et al.,** July 20th 1999 filed October 6th 1997.

E) US patent 4,829,252 issued to **Kaufman** May 9th 1989.

F) US patent 6,128,522 issued to **Acker et al.,** October 3rd 2000 and filed May 22nd 1998.

G) US patent 6,049,208 issued to **Takekoshi et al.,** April 11th 2000 filed Nov. 17th 1995.

H) US patent 6,094,590 issued to **Kan et al.,** July 25th 2000 filed September 18th 1997.

I) US patent 4,968,937 issued to **Akgun** November 6th 1990.

J) US patent 6,317,619 B1 issued to **Boernert et al.**, November 13th 2001 filed July 29th 1999. (Applicant's perfected priority eliminates this reference as prior art.)

K) US patent 6,298,259 B1 issued to **Kucharczyk et al.,** October 2nd 2001 filed October 16th 1998. (Applicant's perfected priority eliminates this reference as prior art.)

Conclusion

33. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tiffany Fetzner whose telephone number is: **until January 27th 2003** (703) 305-0430. After **January 27th 2003** (571) 272-2241 The examiner can normally be reached on Monday-Thursday from 7:00am to 4:30pm., and on alternate Friday's from 7:00am to 3:30pm.

34. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego Gutierrez, can be reached on (703) 308-3875: **until February 10th 2003** After **February 10th 2003** (571) 272-2245. The **only official fax phone number** for the organization where this application or proceeding is assigned is **(703) 872-9306**.

35. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-0956.

Diego Gutierrez

TAF

Supervisory Patent Examiner

December 11, 2003

Technology Center 2800